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## Letters of Edward Jenner

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## LETTERS OF EDWARD JENNER\*

GENEVIEVE MILLER, M.A.\*\*

In January, 1932, the late Dr. Henry Barton Jacobs, of Baltimore, presented his extensive collection of medical books, portraits, medals, and autographs to the Welch Medical Library of the Johns Hopkins University. His treasures, which had previously been carefully bound and cataloged, were placed in a special room in the Institute of the History of Medicine furnished by Dr. Jacobs with handsome mahogany bookcases, cupboards and drawers for prints and medals, and stained-glass windows commemorating his medical heroes, Laennec, Pasteur, Jenner, and Osler. In a charming presentation address Dr. Jacobs explained how he became interested in medical history and why he selected the particular phases of it which were represented in his collection.\*\*\* He declared that the death from pulmonary tuberculosis of a younger brother to whom he had been devoted had led him not only to study the disease in great detail and to participate in the earliest organizations which disseminated popular information about preventive measures, but also to collect books on the subject. In those days he, together with Harvey Cushing and Thomas Futcher, lived

next door to Osler, and it is well known how infectious Osler's book-collecting habits were. One of Dr. Jacobs' first purchases was a copy of the first edition of Laennec's *De l'auscultation médiate*, 1819, considered by Garrison as the foundation stone of our modern knowledge of diseases of the chest. This book Dr. Jacobs acknowledged to be the nucleus of his collection. Then, going forward and backward in time, he assembled the various books which could have influenced Laennec, as well as subsequent advances in our knowledge of tuberculosis, all of which resulted in extensive collections of famous members of the French school, such as Bichat, Corvisart, Broussais, Louis, Andral, leading ultimately to the bacteriological pioneers, Pasteur and Robert Koch.

Koch's discovery of the specific cause of tuberculosis gave the hope that one day the disease could be eliminated altogether, just as smallpox had practically disappeared through the preventive action of vaccination. Edward Jenner thus became Dr. Jacobs' second hero, and he collected everything that he could find on Jenner and vaccination. This included complete editions of Jenner's writings, over one hundred autograph letters, many of the extremely rare pamphlets *pro* and *contra* vaccination which were published all over the Western world after the discovery, instruction sheets on the best methods of vaccinating, en-

\* From a paper read at the Boston Medical History Club on April 14, 1947.

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\*\*\* For an account of the presentation ceremony and Dr. Jacobs' address cf. "Dedication of the Henry Barton Jacobs Room," Bull. Johns Hopkins Hosp., 1932, 50:305-317.



graved diplomas of members of a vaccination society, caricatures ridiculing the practice, many engraved portraits of Jenner, the original oil portrait of him painted by J. R. Smith in 1801 from which some of the engravings were made, medals, and even a clipping of hair from the hide of the cow from which Jenner obtained his first lymph. Included also are a number of items pertaining to smallpox inoculation, the preventive measure which preceded vaccination in the eighteenth century. But Dr. Jacobs never concentrated so extensively on this field as did Dr. Arnold Klebs, whose magnificent medico-historical library has recently come from Switzerland to the Historical Library of the Yale Medical School. The Yale and Hopkins collections on the history of inoculation and vaccination are probably among the most complete in the world.

It was Dr. Jacobs' wish that catalogs of his various collections should be published. At the time of his death in 1939 work had already begun on the book catalog, which unfortunately has been delayed. But in the meantime an expert numismatist has studied the medals, of which there are over one thousand, and the printing of that catalog should begin very soon. This will contain a detailed description of each medal, together with pertinent historical and biographical data on the subject. It is hoped that a similar catalog of the more than 2,500 medical prints will follow. Finally, work has been progressing on the autograph letters of the collection which include many fascinating items in addition to the more than one hundred letters by Jenner. For example, there is a description of inoculation by Mirabeau, and interesting letters by Laennec, Jean de Carro, John Hunter, Benjamin Rush, Benjamin Waterhouse, Robert Koch, and many others.

Dr. Jacobs' explanation as to why he collected letters shows his keen interest in the character and personality of historical figures:

In the study of the characters of men, we first examine their books, and then their faces as portrayed in their pictures, so also we examine their handwriting, for in *it*, often more than in either of the other two, the true nature of the individual is made evident. Therefore, I have felt no Collection was complete which did not contain the autograph letters or manuscripts of the authors in which we were interested. Furthermore, we never get so close to a man or woman as when we are touching and reading a letter or a note which they themselves have breathed upon and penned with their own hands. We are then in the most intimate contact possible with our author or friend, if he be no longer living. Take, for instance, the letters of Edward Jenner, of which there are over one hundred in the Collection; it is only necessary to look at his carefully written pages to realize, if the beautiful portraits which exist of him did not already express the same thing, what a noble, kindly, generous man he was; the friend of the great John Hunter, so modest and benevolent with but the single thought in mind of wiping out of the world the greatest of all human plagues.

Although the outline of Jenner's life is already familiar to many, it seemed desirable to use the biographical approach in a discussion of his letters, since such documents, after all, constitute but infinitesimal fragments in the canvas of an individual's life story. The letters in this collection do not reveal any new or startling facts in Jenner's career, or alter perceptibly the impression of Jenner which was given by his friend and biographer, Dr. John Baron (1838). But, as Dr. Jacobs stated, they do bring us closer to the man, he becomes almost alive once more, and in reading his letters we feel as if we were looking over his shoulder as he writes advice to his son, who is studying at Oxford, or prescribes a regimen for the ailing wife of one of his close friends. In these 103 documents of the Jacobs Collection he corresponds with all manner of people in the various roles of a warm friend, a father, the discoverer of vaccination, and the family doctor. Most of the letters are fairly long and all are entirely in Jenner's own hand. Envelopes were not yet in common use at the time, and nearly all these letters have the address and postmark on the back, a few still bearing traces of the wax with which the folded sheet was



sealed. Of the entire collection, only three letters were written before 1798, the year of the publication of his *Inquiry into the Causes and Effects of the Variolae Vaccinae*, and the last of which we have the exact date was penned in June, 1822, seven months before his death.

Edward Jenner was born in 1749 in Berkeley, a Gloucestershire village near the Severn River, almost halfway between Bristol and Gloucester. His father, the Reverend Stephen Jenner, was an Anglican clergyman, educated at Oxford, who came from an old Gloucestershire family. He was the vicar of Berkeley and possessed a considerable inherited estate. Life in the village was oriented toward the big castle of the Berkeley family on the hill southeast of the village, which had been built in the Middle Ages and which, incidentally, was still being inhabited by members of the same family as recently as 1910. Jenner's father had been a tutor to one of the earls of Berkeley; Jenner himself was in close touch with members of the family and frequently visited the castle. When the question of the succession of the earldom came up in Parliament, Jenner was called upon to testify. The post of magistrate, which he held for many years in the latter part of his life, was probably an appointment of the Berkeleys, for they virtually owned the village.

Nearly all Jenner's relatives were intimately connected with the church. His clerical father has already been mentioned. His mother was the daughter of a clergyman, his two elder brothers followed in their father's footsteps, and two of his three sisters married rectors in neighboring villages. Upon his father's death, when Edward was three years old, he was placed under the care of his eldest brother, the Reverend Stephen Jenner. At an early age he was sent to study with several clergymen in near-by towns, first to the Reverend Mr. Clissold at Wotton-under-Edge and then to the Reverend Dr. Washbourn at Cirencester,

where he received the elements of a classical education. A number of the letters which will be discussed later were written to friends whom he came to know as a boy in these places. Here also arose his interest in natural history and geology, which was to engage him for a lifetime. Of all the English counties, Gloucestershire in the western midlands, bisected by the Cotswold Hills, is most admirably suited for geological studies. It has a great variety of geological formations where many fossil remains may be discovered.

Jenner began his career in medicine by going to Sodbury, near Bristol, to study surgery and pharmacy with a prominent surgeon, Mr. Ludlow, and a Dr. Hardwicke. Information about this period of his life is very scanty. More becomes known after 1770, when, at the age of twenty-one, Jenner went to London and became a house pupil of John Hunter. A warm friendship sprang up between the two, which lasted until Hunter's death in 1793. The Jacobs Collection contains five letters which Hunter wrote to his former pupil. In one of them Hunter put Jenner to work on finding the temperatures of hibernating hedgehogs, and in another Hunter told how busy he was dissecting an elephant. Upon the arrival of Jenner's firstborn son, Hunter was appointed godfather. In accepting, Hunter wrote (Paget, 1898): "Sooner than the brat should not be a Christian I will stand godfather, for I should be unhappy if the poor little thing should go to the devil because I would not stand godfather."

There is little doubt that contact with Hunter provided an enormous stimulus to Jenner's subsequent scientific activities. While Hunter's pupil he had prepared and arranged many of the natural-history specimens brought back by Captain Cook in 1771 from his first voyage of exploration; and when the second voyage was being planned in 1772, Jenner was offered the position as naturalist. This, however, he



declined, for he was evidently anxious to return to Berkeley to begin practice. Jenner was very deeply rooted to his home soil, and except for short sojourns in London necessitated by his vaccination work, he rarely strayed beyond the boundaries of his native Gloucestershire. Even Hunter's invitation to join him in a school to teach natural history, including human and comparative anatomy, did not tempt him.

The years between 1772, when Jenner returned to Berkeley, and 1798, when his book on vaccination was presented to the world, were, in the main, quiet ones. He became an active country doctor and a prominent member of the community. Continually prodded by Hunter to send him various animals and birds to study, Jenner's own interest in natural history was unfagging. In addition to collecting numerous geological and anatomical specimens he made studies of the migration of birds and published an article on the cuckoo in 1788 in the *Philosophical Transactions*. He helped to organize a club of local physicians and surgeons, who met at the Fleece Inn at Rodborough with the object of improving medical science. In one paper read to this society, which unfortunately was lost and never published, Jenner pointed out that there was a connection between acute rheumatism and heart disease (Keil, 1939). During this period of his life Jenner also became interested in the general problem of the change of structure in the body, as manifested in tumors. Current medical opinion attributed such changes to inflammatory action, but in studying diseases of lower animals Jenner concluded that this could not be true, and he finally decided that the hydatids could explain a great many changes. In his later letters the problem was mentioned on several occasions.

The first letter in the Jacobs Collection dates from this period of Jenner's life and shows still another of his interests, quite differ-

ent from medicine or natural history. He was constructing a balloon. When the Montgolfier brothers of France, in June, 1783, gave a successful demonstration of the ascent of a balloon filled with heated air, a great deal of attention was paid to the subject and many people began to experiment with them. In England the first successful demonstration was made five months later, when a visiting Italian constructed a balloon of oiled silk and inflated it with hydrogen.

Jenner's letter to his close friend Dr. Caleb Hillier Parry, of Bath, who had been one of his fellow pupils at Cirencester, tells of the balloon he was constructing:

Your directions respecting the Balloon are so clear & explicit, tis impossible for me to blunder; but to make it quite a certainty, I intend first to fill it & see if it will float in the Castle-Hall, before the publick exhibition. Should it prove unwilling to mount & turn shy before a large assembly, don't you think I may make my escape under cover of three or four dozen Squib & Crackers.

Jenner continued the letter by asking Parry to send him some silk to mend the mouth of the balloon which had been torn. Baron tells us that the flight, which evidently occurred sometime between 1783 and 1786 (the letter is undated), was successful and was later repeated at another village in the county with a poem penned by one of Jenner's friends being carried aloft by the hydrogen-filled ball (Baron, 1838).

In 1783 Jenner took his nephew, Henry Jenner, into his house as an apprentice, and the latter helped him in his natural-history experiments, doing such things as running to inspect cuckoos' nests and similar chores, in addition to assisting with a busy practice. Eventually Jenner decided to limit his practice to medicine alone, and in 1792 procured an M.D. degree from St. Andrews University. This degree was granted *in absentia* merely upon the recommendation of Jenner to the university by two of his friends who were doc-



tors of medicine. This custom had originated in the Scottish universities in the eighteenth century, and St. Andrews was notorious for it. At the time of Jenner over nine tenths of all degrees granted by the university were in medicine, and most of these were *in absentia*, with an average of twenty such degrees being granted each year.\* In a letter written fifteen years later to Edward Jones, Esq., a surgeon in Montgomeryshire who had published a stanch defense of Jenner against the antivaccinists, we find Jenner assisting someone else to get a degree:

[July 22, 1807]

I had no conception [he wrote] I should have had any difficulty in obtaining your Diploma, but the precision that marks the Scotch character it seems, calls for an obedience to the exact compliance to the form of the Certificate they have laid down at St. Andrews. Can you point out to me any Physician here who is *personally* acquainted with you. Here stands the impediment at present. Dr. Willan, whose note I enclose, sticks at this point, & so will others, unless they can certify that they are personally acquainted with you. As for myself, I chuse to put a *figurative* meaning to the expression, and feel myself sufficiently satisfied from the intercourse I have had with you that you are justly entitled to the degree of Doctor of Physic from any University.

This system was condemned in 1830 and rigid regulations imposed to eliminate the practice of buying diplomas.

The vale of Berkeley, with its rich loamy soil, lying to the west of the Cotteswold Hills was excellent for pasturage, and the region early became famous for its cheese and butter, producing the renowned "double Gloucester" cheeses. It is not very surprising that the discovery of the efficacy of cowpox inoculation against human smallpox should have originated in such a dairy country. It has been stated that Jenner's attention was first drawn to the subject when he was a very young medical student at Sodbury. One day a young country woman came in to consult the doctor,

and during the conversation smallpox was mentioned. Whereupon the woman said, "I cannot take that disease, for I have had cowpox" (Baron, 1838). This started Jenner to thinking, and he began to see the possibilities if such a folk belief should be true. He frequently discussed the problem with his friends and told Hunter about it. What he needed was *proof*, and for nearly thirty years he pondered, observed, and made experiments when he could. There were many difficulties involved, for he soon found that cowpox was a general term which was applied to several diseases contracted from cows, and that a person may have an attack of so-called "cowpox" and still might become a victim of smallpox. He had to learn the appearance of the genuine cowpox eruption on the human body and also the exact time when lymph from such an eruption was capable of being used to inoculate someone else. He used his infant son for an experiment in 1789, taking lymph directly from a cow, and his experiment to see whether successful vaccination could be performed with lymph obtained from a human being who had been infected with cowpox was performed in 1796. On this now historic occasion Jenner took lymph from the pustule on the hand of the milkmaid Sarah Nelmes and inserted it into the arms of the boy James Phipps. The boy developed a typical case of cowpox and, on subsequent inoculation with smallpox, proved to be immune. As chance would have it, just at this point cowpox disappeared from the dairies of the neighborhood, and it was some time before Jenner could continue his experiments. Meanwhile he started writing the paper which was to announce his discovery. He proceeded very cautiously before publishing it, as he realized the consequences of a hasty, unclear presentation. He showed copies of his draft to his close friends, who worked over it with him. Finally, at the end of April, 1798, he and his family went to London, where his *Inquiry into the*

\* *Votiva Tabella*, a memorial volume of St. Andrews University. Printed for the University, 1911, p. 217.



*Causes and Effects of the Variolae Vaccinae* was published in June. He carried with him some dry cowpox lymph to demonstrate his discovery, but not one single volunteer presented himself. In the middle of July he returned to the country, leaving some of this lymph with Mr. Henry Cline, a London surgeon, who eventually used it on a boy with an ailment of the hip joint to produce counterirritation on the spot. However, Cline did inoculate the boy afterward with smallpox to see what would happen, and when the boy did not take the infection he was convinced that Jenner's discovery had some value. He then tried to urge Jenner to move to London, assuring him that he would soon have a large practice. A letter to another friend who had made a similar suggestion gives us Jenner's own feeling in the matter (Baron, Vol. I, p. 135):

It is very clear from your representation that there is now an opening in town for any physician whose reputation stood fair in the public eye. But here, my dear friend, here is the rub. Shall I, who even in the morning of my days sought the lowly and sequestered paths of life, the valley, and not the mountain; shall I, now my evening is fast approaching, hold myself up as an object for fortune and for fame?—Admitting it as a certainty that I obtain both, what stock should I add to my little fund of happiness?

My fortune, with what flows in from my profession, is sufficient to gratify my wishes; indeed so limited is my ambition and that of my nearest connexions, that were I precluded from future practice I should be enabled to obtain all I want. And as for fame what is it? a gilded butt, forever pierced with the arrows of malignancy. The name of John Hunter stamps this observation with the signature of truth.

From this time on Jenner's correspondence increased tremendously, so much so as to be a terrific burden to him, and many of his letters begin with an apology for his tardy reply. That it was in his nature to procrastinate, however, is shown in the following charming note to an intimate friend in Bristol, written in October, 1797, the year before he became burdened with the problems of vaccination. Here his warm, generous nature and friendly concern for others is amply revealed:

[Letter to Wm. Peter Lunell, Esq., Oct. 8, 1797]

You may pull and you may tug, my dear Friend, but powerful as is your arm & benevolent as is your heart, it will be all to no purpose.

Can you model anew my Constitution? New arrange, new organize the particles which compose my frame? Could you, with the special authority of Omnipotence, do this; you would then take off those unfortunate eccentricities which so closely attach themselves to my Character. Forgive then my neglectfulness like a Philosopher.

The hour may come (I do not despair of its arrival) when my Stomach, where, wielding an absolute Sceptre, sits the grand Monarque of the Constitution, may undergo some spontaneous change, which may meliorate its present condition; and then I trust you will find me a more orderly correspondent, and that William Shakespear may furnish me with a better motto than that which is now, alas, too applicable "To morrow, to morrow & to morrow."

Many of your Friends, among the rest Miss Wells, reported your intention of renewing your visit to our Spa \*—I fear we shall see no more of you this season. But at Berkeley, before the Catherine Pear Tree again puts forth its leaves, I hope you will favor me with much of your society. Mrs. Jenner, who by means of a roast beef Breakfast, dinner & supper has thrown off the languor that was hanging about her when you saw her at Berkeley, is soon going with me to London to spend a month or two . . .

Pray how is your amiable Wife?—the sensitive Plant?—poor John & all my old acquaintance? John, I hope goes on with his Steak & his Mutton Chops, abstaining from innutritious and indigestible matters and parting with intestinal debility.—And pray how are your Eyes?—My little Lecture on this subject did not sufficiently catch your attention. I know not why; for the preservation of this invaluable organ has occupied much of my Time, & perhaps the most intense of my Studies have been devoted to it. I shall take an early opportunity to send you [Erasmus] Darwins botanical Works—Delightful! Dont accept them as a present, but as a mark of my chemical skill—the conversion of matter—a mineral into a vegetable.

—You will scarcely understand my writing—I am in bed, confined by lameness, brought on by a violent blow on my leg.

Adieu!

Believe me Ys. very faithfully  
Edw. Jenner

The reaction to the publication of Jenner's *Inquiry* was mixed. It was certainly an announcement which could not be ignored, and while men like Ingenhousz, the distinguished scientist and physician to the Austrian emperor, remained unconvinced, others were

\* Cheltenham, a watering place near Bristol to which Jenner and his family went every year.



eager to begin the practice and wrote to Jenner for vaccine matter. In the fall of 1798 his supply ran out, as the following letter states, and it was several months before cowpox appeared again in the Gloucestershire dairies:

Mr. Edward Bevan, Surgeon  
Stoke upon Trent near Newcastle under Lyme  
Cheltenham, Oct. 17, 1798

Sir

I would with great pleasure send you some of the Cowpox Virus (as I much wish to see the Inquiry prosecuted) were it in my power, but at present I have not an Atom, & greatly fear that during the continuance of the autumnal & winter months that none will be generated, as the Cow's Nipples are involved & defended by a thick Cuticle. When you proceed on your experiments on this subject, excuse my urging you to be cautious in the selection of your matter—Much confusion may arise from its being used when partially decomposed by putrefaction,\* as in that case a disease would arise which would not give security from the contagion of smallpox. As cautious too should those be who prosecute the Inquiry, of using the matter which appears *spontaneously* on the Nipples of Cows.

Your observation respecting the disease's not appearing in your neighbourhood, if a dairy Country is certainly important & may tend perhap to elucidate that part of the subject which at present remains in some degree mysterious; I allude to the origin of the disease. I must beg you to have the goodness to tell me whether Men Servants, Carters & such as are employ'd among Horses, are also employ'd as Milkers of Cows.

In Scotland as well as Ireland, it seems no Men Servants are employ'd in the dairy. This tends to strengthen what I so strongly suspect that the disease arises from morbid matter generated by a Horse.

When I see my Nephew, I shall certainly present your comps.

I am Sir

Your very obt. Servt.

E. Jenner

Be kind enough to direct to me at Cheltenham.

Here Jenner is following his researches into the origin of cowpox. He was of the opinion that a disease called the grease, which attacks the heels of horses, and cowpox are actually the same disease, and that cows become infected through being milked by men who attended horses. This question of the relationship of grease, cowpox, and smallpox was one which aroused much interest immediately after Jen-

ner's discovery, and which has been studied until recent times.

Difficulties soon began to arise. Some of Jenner's most enthusiastic early followers plunged into vaccination without adequate knowledge of the procedure. Vaccinations would result in a general eruption all over the body resembling true smallpox, instead of the solitary pustule which Jenner had predicted. Obviously such results tended to discredit the discovery, and in these years he was mostly occupied with enlightening his followers in matters relating to the purity of the cowpox lymph and urging them never to vaccinate with lymph taken from a patient with such a general eruption. At the smallpox hospital in London, Dr. George Pearson and Dr. William Woodville inoculated patients with smallpox only a few days after the cowpox lymph had been inserted. When many pustules appeared, they assumed this was the true course of the disease and made public their results. Jenner was forced to take up residence in London for several months in the spring of 1799 in order to try to correct some of the abuses.

Meanwhile word of the discovery had spread rapidly to other countries. Here in America the pioneering work of Benjamin Waterhouse, John Redman Coxe, James Smith, and others is well known. The chief promoter on the continent of Europe was Dr. Jean de Carro, a Geneva physician educated in Edinburgh, who had settled in Vienna because of political disturbances at home. The Jacobs Collection contains a number of letters from De Carro to Dr. Alexander Marcet, a younger friend from Geneva who had also gone to Edinburgh and then had settled in London. Written between 1794 and 1817, these letters are of extraordinary interest, for they describe in detail his own efforts in behalf of vaccination and the great difficulties which he had at first with the Viennese authorities. We possess only one letter from Jenner to De Carro, parts of which

\* See page 56 of Jenner's *Inquiry*.



are quoted below, as it expresses the gratitude which Jenner felt when his work was taken up by others and the great care which he took to see that vaccination was done properly:

Berkeley, November 27, 1799

Sir

I scarcely know an occurrence since the commencement of my Inquiry into the nature of the Variolae Vaccinae that has given me greater satisfaction than the reception of your Letter. It breathes the true spirit of philosophic candour, & has placed its author high in my estimation.

Conscious of its importance it was always my hope that the subject would be taken up on the Continent, and I am much gratified to see it fall into such able hands in Vienna; for I never had a fear of its failure but from its being conducted by those who were incapable of making just discriminations.

I cannot forbear congratulating you on the success you have already met with, altho it must be confess'd that congratulation bears hard upon egotism. From the state of your Patients arm when you wrote your Letter, it seem'd clear that you would succeed in reproducing the disease with the matter you found upon the Linen, yet, having now some fine Cases before me, I have enclos'd two portions of the Virus taken from different subjects; & with the view of excluding Oxygen as much as possible, I have plac'd it between two pieces of Glass. The quantity is larger than it appears, as so much evaporation takes place in drying. When you make use of it, moisten it either by taking up a very small portion of water on the point of your Lancet, or by breathing upon it. . . .

After reading my Publication and observing my assertion that the Cowpox does not produce Pustules, you may probably ere now have been much surpris'd at finding that they appear'd in considerable abundance among the Patients, inoculated with virus taken from a Cow, at the Smallpox Hospital in London. However I presume this surprise will cease when you are inform'd that on the 5th day after the Cowpox Virus had been inserted into one arm, the variolous virus was inserted into the other, in those whose eruptions resembled those of the smallpox; & thus, in my opinion, the two diseases became blended. The Pustules, as the disease made its progress from one Patient to another soon began to decrease in number, and now they are become quite extinct, the matter producing appearances exactly similar to that newly taken from the Pock on the Nipple of the Cow. How extremely curious & singular is this Fact! Does it not almost tell us that the Cowpox is the original disease, the Smallpox a Variety & being the weaker is driven off by the stronger? or is the latter assimilated by the former?

Conceiving it possible that the pamper'd London Cow (from which the Virus was taken to the Smallpox Hospital) might generate it in some respects different from the Animal that ranges, more in a state of Nature, over our pastures in the Country (from which source I had been accustomed to make my

Experiments) I procured some from a Cow at one of the Farms on the confines of London. But altho' this matter has been passing from one person to another for the space of several months & upwards of two hundred Persons have been inoculated from this source, yet no Pustules have appear'd among any of them. I do not mean to say that no rashes or eruptions of any sort have attended the disease. When the *Areola* has spread wide around the inoculated Pustule I have sometimes seen a rash upon the Patient, and sometimes several pimples, small, hard & of a redish colour have shewn themselves on different parts of the body, some of which have contain'd a perceptible fluid at their apex. But this appearance is very rare, and I imagine takes place on the same principal as when excited by the local stimulus of many acrid substances. For example, the local inflammation & irritation of Cantharides, Burgundy Pitch, Emetic Tartar & many other irritative substances will as often produce general affections of the skin as the virus of the Cowpox; indeed I think more often.

I should be extremely happy to furnish you with matter immediately from the Cow, but in this part of our Island I have not heard of the existence of the disease among Cattle for several months past. What I have sent I hope may retain its activity till it arrives at Vienna—My best wishes accompany it. The Glasses are dated to shew you how long the matter has been taken from the arm.

I shall not trouble you with a detail of Cases, but in a word shall inform you that in this Island the numbers inoculated with vaccine virus already exceed five thousand. Nothing has occur'd to lessen the confidence I at first held out; on the contrary fresh & convincing evidence of the powers of the vaccine disease in destroying the effects of the variolous is constantly flowing in. I hope to be favor'd with your correspondence & remain, Dear Sir, your obedient humb: Servt.

Edw: Jenner

When Jenner later sent him a snuff box as a present, De Carro thus expressed his pleasure to his friend Marcet:

[Oct. 5, 1803]

I can tell you that whatever respect I have for all the sovereigns of the world, there is not one who could have given me greater pleasure than I am experiencing by being thus distinguished from the part of this illustrious man. If he came to Vienna or if I went to London I would kiss his mule in his quality as Holy Father, but from afar I love him, I venerate him and I am extremely proud of the present that he is making me.

The Jacobs Collection also contains twenty-one letters which Jenner wrote to Marcet, who seems to have served as a liaison between Jenner and many continental physicians. We find that Marcet forwarded to him communications



on the progress of vaccination in Copenhagen and other places, and in 1809, when the Napoleonic Wars were raging, Jenner asked Marcet's advice on the possibility of getting letters into Holland and Germany. Jenner's difficulties with his correspondence are most frequently confessed to his friend Marcet, as in the following letter of 1812:

[March 26, 1812]

Medical Men in general you know, however fully occupied, have the duties of their profession only to perform; but with regard to myself, I have as you well know the multifarious toils of Vaccination to attend to, the chief of which is a correspondence that knows no limits. This perplexes, indeed confuses me. For what can be more harassing to the mind than a consciousness of having in ones possession heaps of unanswered Letters, while at the same time the generality of their authors are filld with amazement at my conduct from a misconception of its real cause.

Although under ordinary circumstances Jenner's medical practice and his inherited property would have been sufficient to support him comfortably, the great demands on his time which his vaccination work entailed, and the necessity of frequent visits to London were a severe drain on his resources. He was therefore advised to apply for a Parliamentary grant, and a number of the letters mention Jenner's petition to the House of Commons to be remunerated for his discovery. Early in 1802 he wrote to many individuals who he knew had been successful with vaccination. One such letter was addressed to Dr. James Currie, of Liverpool, a prominent physician of the time who also distinguished himself in the world of letters by writing the first biography of Robert Burns. Marcet sent Jenner reports from abroad. Armed with such documents and eagerly supported by his friends, Jenner presented his petition to the House of Commons on March 17, 1802. While there was some opposition, eventually Jenner was awarded £10,000. Henry Addington, prime minister and chancellor of the exchequer, argued against awarding a larger grant, because he

believed that the public honor bestowed by Parliament constituted "a reward that would last forever, and also [he believed] that the comfort of his family would be amply provided for in his extended practice."\*

This grant did not solve Jenner's problem; in fact, there is evidence that it had not yet been paid to him two years after the grant was made. In 1803 Jenner decided to move to London in order to take advantage of the lucrative practice promised by Addington. He took a ten-year lease on a house there and furnished it, but soon he found that it was decidedly unprofitable to live in London. In a letter of March 8, 1803, he complained to a friend:

[To T. Cobb, Esq.]

Accept my warmest acknowledgements for your kind congratulations. Honours certainly fall in showers upon me, but Emoluments fall off. You who possess a generous heart will feel indignant when I tell you that those identical People who last year brought their Children to me to be inoculated, now take their new born little ones to their domestic Surgeon or Apothecary for that purpose—and why? They save perhaps a few Guineas by the exchange.

Jenner's friends felt that he had not been sufficiently rewarded by his Parliamentary grant, and in July, 1806, the request for another grant was brought before the House of Commons, sponsored by Lord Henry Petty, the chancellor of the exchequer, who recommended that the Royal College of Physicians should draw up a report of its opinion concerning the value of vaccination. Jenner stated in a letter of August 30, 1806:

Lord Henry Petty spoke most charmingly in the House of Commons on the Vaccine Subject. The Reports I continue to receive from abroad are delightful. Among my last are these: that the smallpox is quite subdued in the City of Lyons; and at Geneva, there has not been a Small pox Funeral these five years. While Alas! in London & its Environs the smallest computation is six thousand within the last twelve months!! Bravo, Drs. Moseley, Squirrel, Lipscombe & Co.

\* Rev. G. C. Jenner, *The evidence at large, as laid before the Committee of the House of Commons, respecting Dr. Jenner's discovery of vaccine inoculation*, London, 1805, pp. 194, 195.



The last named were outspoken antivaccinists who will be mentioned again in subsequent letters.

Petty's recommendation was followed, and during the next year the College of Physicians collected reports on vaccination which were published in the summer of 1807, with an appendix containing the opinions of the Royal College of Physicians of Edinburgh and Dublin, and the Royal Colleges of Surgeons of London, Dublin, and Edinburgh. Most of these organizations endorsed vaccination enthusiastically, but the report of the Royal College of Surgeons of London was a formal, matter-of-fact presentation of statistics based upon questionnaires sent out to its members, with no commentary or recommendations. Jenner confessed his disappointment to Marcet:

[July 21, 1807]

I beg your acceptance of a Copy of *the Reports*—that of the Col: of Phys: is as warm as I could expect; & perhaps it will prove more impressive than opinions deliverd in a more energetic Form—But what cold, icy-hearted Mortal drew up the Report of the Col: of Surgeons (not of Scotland or of Ireland) but of England? How unfortunate, that a Body of Men so respectable should have sufferd resentment thus to have operated.

The favorable recommendation of the College of Physicians, together with the testimonies and diplomas which Jenner had received from many scientific societies on the Continent, eventually won for him an additional Parliamentary grant of £20,000.

Mention has been made of the growing opposition to vaccination. It reached a peak in 1805, and in a letter of December of that year we find Jenner thanking Mr. Edward Jones, of Montgomeryshire (mentioned above in connection with the application for a St. Andrews diploma), for supporting him publicly. Jones had published a pamphlet entitled *Vaccination Vindicated against Misrepresentation and Calumny*, which was a reply to a treatise by R. Squirrel, M.D., *Observations Addressed to*

*the Public in General on Cow-pox, Shewing That It Originates in Scrophula*. In thanking Jones for his support Jenner stated that he had "never met with anything better calculated to excite contempt for the malignant efforts of those who have attempted to delude the people and bring the new practice into discredit" (E. Jenner to Edward Jones, Dec. 7, 1805). Squirrel, whose real name was John Gale Jones, was one of a group including John Birch, William Rowley, George Lipscombe, and Benjamin Moseley, who filled the journals of the day with antivaccination articles and attempted to frighten the public with lurid descriptions of people who came to look like cows after vaccination or who contracted animal diseases. Many of these men were of questionable reputation; it has been proved that Rowley plagiarized a German text book of ophthalmology. Benjamin Moseley, who had been surgeon-general at Jamaica for a number of years, was the most influential of the group and presumably one of the most outspoken, for in the same letter Jenner referred to an article published by Moseley in the *Gentleman's Magazine* with the remark: "If you should chance to see it, you will find that Moseley has far outstripped his Competitors in antivaccine fame, Squirrel, Birch & Rowley. I thought in point of scurrility, malevolence and misrepresentation, they had gone pretty great lengths, but Moseley has far surpass'd them." Jenner told another friend who had published a reply to Moseley, "You certainly set the venom flowing freely from the jaws of that mad animal M—" (to R. Phillips, Feb. 23, 1806). Jenner hoped that the reports presented to the House of Commons would silence his opponents: "This Inquiry [he wrote] will lay all those troublesome Ghosts which have so long haunted the Metropolis with their ox-faces, & dismal hootings against Vaccination." (to R. Phillips, Jan. 16, 1807.) Unfortunately this did not prove true. Even a journal



called the *Medical Observer* was created, the purpose of which was "to expose to the Public the pernicious consequences of the mal-organization of Medicine," and one of its chief targets was Jenner and vaccination. "That miserable Catch-Penny Journal," as Jenner called it (to Dr. Thomas Charles Morgan, Dec. 21, 1808), was published between 1806 and 1809, and was a constant source of annoyance to him. At the same time he was having difficulties in another direction.

In 1803, five years after the publication of Jenner's *Inquiry*, the Royal Jennerian Society for the extermination of the smallpox had been founded as a charitable organization to carry on free vaccination among the poor. With an imposing list of royal patrons and sufficiently endowed by voluntary contributions, it remained quite active until 1808, when internal dissent caused its decline. Proponents of vaccination then decided that a new organization which had the support of the British Government should be founded, and Jenner was called to London as a consultant. The outcome was the creation of the National Vaccine Establishment at the end of 1808. Its board was composed of representatives from the College of Physicians and College of Surgeons of London, with Jenner as director. New troubles arose almost immediately, for when Jenner began to appoint vaccinators for the various district stations, most of his nominees were rejected by the board. Jenner resigned after a few months, "having crept," he wrote to a friend, "from under the *thick, heavy* Board, which so unexpectedly fell upon me & crush'd me so sorely" (to Dr. Thomas Charles Morgan, March 1, 1809). When the same friend pressed him to make a public explanation of his position, Jenner wrote, "If it should be thought of consequence enough for an Enquiry, I shall meet it with pleasure; but tho' I say 'with pleasure,' I had much rather they would let me alone, and suffer me

to smoke my Seagar in peace & quietness in my Cottage" (to Dr. Morgan, March 1, 1809).

These were sad days for Jenner, because meanwhile his elder son had contracted pulmonary tuberculosis. "This is a melancholy prospect for me," he wrote in July, 1809, "& I scarcely know how to bear it. The decrees of Heaven, however harsh they may seem, must be correct, & the grand Lesson we have to learn is humility" (to Dr. Morgan, July 11, 1809). Three months later he confessed his depression: "You may easily guess what a state of mind I am in, by my neglecting my Friends. This I was not wont to do. I am grown as moping as the Owl, and all the day long sit brooding over Melancholy. My poor Boy still exists, but is wasting inch by inch. The ray of Hope is denied only to a medical Man when he sees his Child dying of pulmonary Consumption; all other Mortals enjoy its flattering light" (to Dr. Morgan, Oct. 9, 1809). And in December: "My poor Boy still lives, but without the most distant hope of recovery; and this idea ever haunts me. Stoical Philosophy is all nonsense—these People either possess'd no sensibility, or their real feelings were disguised by affectation. A man cannot change the nature of his mind at will, anymore than he can the colour of his Eyes. He must take it as it is presented to him & work it will, its own way" (to Dr. Morgan, Dec. 31, 1809). Jenner's son died early in the next year, and the grief occasioned by his illness and death resulted in increased anxiety about the health of his other son, Robert. The letters which he wrote to Robert, who was away at school, dwell continually on the subject.

It is through one of these letters to Robert that we obtain a side light on a rather exciting event of the time. In the summer of 1814, after Napoleon had abdicated and peace was restored, the victorious allied sovereigns visited England before proceeding to Vienna for the peace conference. Jenner had taken a house in



London for a few months that summer (it was his last visit there), and many of the distinguished visitors, including the emperor of Russia and his sister, wished to meet him. Writing to Robert, he said:

[July 18, 1814]

Your gratification with regard to our great foreign Guests must be now complete. I went to see the renown'd Platoff yesterday & found him in bed, or rather lounging there wrapp'd in a Pelise. He is a very interesting Figure & tho' he rose from low rank to the dignity of *Hetman*, is full of politeness. His Countenance has a good deal of the Calmuck in it. His Snuff was very excellent.

I have been to the Oldenburgh Hotel no less than three times by the command of the Emperor & Grand Duchess, & was detain'd many hours each time for no purpose. Such Confusion, & such a Medley of Cossacs, Moldavians, Greeks & all sorts of english I never saw before.

After his London visit of 1814 Jenner virtually retired from the public scene. When his wife died the following year, he withdrew even more from the world, and seldom left Berkeley. But through his correspondence he still

*Berkeley House  
Feb. 11 1817*

*Dear Sir*

*I have this evening been  
favoured with your obliging letter enclosing  
the Report of the Progress of the Cow-Pock  
Institution in Dublin.*

*Be assured it is a gratification of  
the highest kind to hear that the practice  
goes on so successfully. I must request  
you to present my respectful Compl. to the  
Governors of the Institution & to accept  
the best wishes of Dear Sir*

*Your obliged & very faithful  
To L. B. Labatt  
M. D. Dublin* *Humble Servant E. Jenner*

Letter from Edward Jenner to L. B. Labatt, M.D., Dublin

kept in touch with people, and his scientific curiosity was by no means dead. In 1816 he was interested in the lymphatics, and wrote to Dr. Charles Parry, the son of his boyhood friend Dr. Caleb Parry:

[Oct. 15, 1816]

Away with the term Scrophula—Let us have something expressive of morbid action, or disease of the Lymphatics. You know how long I have been an Hydatid-Hunter & tho' Time has brought me to a hobble, yet I scramble after my Game as hard as I can. And what do you think? I seem to see him now popping out of a Lymphatic. A speck, or specks, (small hydatids) appear where a like portion of the Lymphatic is lost.

In another letter to Parry, who was having difficulty with the feeding of his infant:

[Aug. 31, 1816]

We have not yet made out *all* the odd things going forward in the animal economy. Tell me how it comes to pass that if I drink a glass of good Cider my Urine smells as fragrant as the bottle when just uncorked? I don't give this as a parallel case, but as a puzzle. There must be a short cut from the Stomach to the Bladder. . . . What if we were to fill the Stomach of a Puppy with Mercury, first tying up the Intestine, & then give it a good squeeze?

The only reference to vaccination in America which occurs in the letters of this collection is in one of January 26, 1818, addressed to the Reverend Dr. R. Worthington, one of his close friends:

I must not forget to tell you that I have a weekly stock of Vaccine fluid, some of which shall become solid & cross the Atlantic whenever you will order it. A Letter at the same time might be useful, as the Matter (which I shall take care to mention) has not been many months taken from its original source; and all they have now in use in America, has been passing there from arm to arm for nearly the fifth part of a Century.

To this same friend Jenner sent an unusual gift:

[December 20, 1813]

You will think me miserably parsimonious in the manner your generosity to Mr. Rowlands is repaid when you open the enclosed packet; but the truth is, you nearly share with me my precious stock. I kept the Cow till she died from age. I had a Calf & that was



cut off prematurely. The Hair grew on the Tail of the Cow that infected the Dairy Girl, Sarah Nelmes from whose hand the Matter was taken that spread Vaccination thro' the World . . . The Cow was *Gloster* with a dash of the northern, & a famous milker.

There is a great deal more in these letters than has been mentioned here. They tell of Jenner's efforts to secure the release of a French prisoner of war, the brother of Husson, who had done so much to spread vaccination in France. Although Napoleon had acceded to Jenner's request for the release of several English war prisoners, so highly was he regarded by the emperor, Jenner was powerless with his own government. Mentioned also is his tremendous joy at the success of the de Balmis expedition sent out by Spain to its possessions in the New World for the purpose of vaccinating the inhabitants of these areas.

With his intimate friends Jenner's letters are playful, with his son they are almost stern and oversolicitous. He gave fatherly advice about laying in only a hamper of wine at a time when his son was at Oxford, instead of an entire stock, which being "the property of an undergraduate could not from the nature of Things, remain a stock long" (to Robert F. Jenner, Feb. 17, 1816). His great interest in his gardens and orchards is frequently noted.

As his days drew to a close, Jenner developed a sensitivity to sharp sounds which was very annoying to him. His last letter to Alexander Marcet, dated March 5, 1822, less than a year before his death, gives a detailed description of his affliction. Marcet had invited him to visit him at his villa in Switzerland, and Jenner replied as follows:

My health since last we met, . . . has suffered considerably. I do not know that any of the ordinary machinery belonging to life has yet suffered materially; but this I know that the most important of all vital Organs, the Brain, does not perform its offices with that smoothness & regularity as it was wont to do. The deviation I have chiefly to complain of, is a morbid sensibility to sharp sounds, so that I am really debar'd from going into any society beyond the circle of my own family, for it requires a constant attention on their parts to prevent the ordinary noises occasioned by the use of common domestic utensils—such as Knives, Forks, Spoons & such like striking against Cups & Saucers, Plates &c. It is not every sound that affects me alike—To some I am far more indifferent than to others—What might be term'd a *hollow sound* makes but little impression, such as the ringing of a Church Bell—a Man hooping a Barrel, or hallooing; but it is the *sharp* sounds emanating chiefly, as I have mentiond, from the utensils which spread over our Tables at breakfast & dinner which annoy my Nerves in this distressing way. In a Female I should call it Hysterical—but in myself I know not what to call it, but by the old sweeping term nervous. Will you allow me to call it electrical? No matter what name it may bear—if you can point out any mode of alleviation, I know you will—I have hitherto made but few attempts on a supposition that these symptoms do not arise from mere morbid determination of blood to the brain, but that there must be something mechanically wrong.

Ten months later on January 26, 1823, Jenner died from apoplexy.

Both beloved and despised during his lifetime, Jenner had assumed the burden of propagating and fighting for his discovery—vaccination. For a man who never sought the world this must have been a most arduous task.

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